

ABSTRACT OF THE DISCLOSURE

Disclosed is a high density magnetic recording medium which has coercivity suitable to a magnetic record, fine grains, and a uniform grain size distribution, and which includes a FePtC alloy thin film containing an optimum carbon content, and a method of manufacturing the high density magnetic recording medium. The magnetic recording medium includes the FePtC alloy thin film containing 25 volume% carbon, thus having microscopic magnetic and structural properties suitable to the high density magnetic recording medium. Additionally, the method of manufacturing the magnetic recording medium is characterized in that the method includes depositing the FePtC alloy thin film on a substrate at 400°C using a dc magnetron sputtering device through a simultaneous deposition process, the FePtC alloy thin film is deposited on the substrate for one hour, and the substrate is heat-treated for one hour. Thereby, a storage density of an information storing substance is increased, a noise of the magnetic recording medium is reduced, and a manufacturing temperature of the FePtC alloy thin film is lowered.